



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105**

January 2, 2018

Derek J. Robinson, BRAC Environmental Coordinator
Department of the Navy
Base Realignment and Closure Program Management Office West
33000 Nixie Way, Building 50
San Diego, CA 92147

Re: EPA Comments on the Revised Draft Remedial Design Package, Parcel E, Hunters Point
Naval Shipyard, San Francisco, California, November 2017

Dear Mr. Robinson:

Attached are EPA's comments on the Revised Draft Remedial Design Package, Parcel E,
Hunters Point Naval Shipyard, San Francisco, California, November 2017.

If you have any questions, please do not hesitate to call me at (415) 972-3681 or e-mail me at
huang.judy@epa.gov.

Sincerely,

A handwritten signature in black ink, reading "Judy C. Huang". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

Judy C. Huang, P.E.
Remedial Project Manager

cc:

Nina Bacey, DTSC (via email)
Tina Ures, RWQCB (via email)
Amy Brownell, SFDPH (via email)
Rebecca Cardoso, US Navy (via email)
Danielle Janda, US Navy (via email)

**Revised Draft Remedial Design Package, Parcel E,
Hunters Point Naval Shipyard, San Francisco, California, November 2017**

Several Responses to EPA Comments (RTCs) could not be fully evaluated because the Remedial Action Monitoring Plan and Remedial Action Work Plans (RAWPs) were not provided to confirm that the issues noted in the RTCs were incorporated and addressed in these subsequent documents. This includes but is not limited to the responses to Remedial Design Package - General Comments 1a-1d; Design Basis Report General Comments 3 and 7; and, Design Basis Report Specific Comments 2, 4-6, 10-12, 15-19, 21, 22, 25, 31, 38, 39, 41, 44, 45, and 52. Please provide the RAMP and RAWP in order for EPA to complete its review.

DESIGN BASIS REPORT

1. **Response to EPA Specific Comment 7:** The response addresses the comment; however, Section 3.1.6 (Site Demolition, Clearing, and Grubbing) continues to reference Design Drawing C3 (Clearing, Grubbing, Demolition, and Surface Debris Removal) of Appendix C (Design Drawings) rather than Design Drawing C1 (Existing Conditions) of Appendix C, as noted in the response. Please revise Section 3.1.6 to reference Design Drawing C1 of Appendix C.
2. **Response to EPA Specific Comment 14:** The response partially addresses the comment. While Section 3.2.5 (Post-Excavation Confirmation Sampling) was revised to clarify that one sample per 50 feet of horizontal sidewall exposed, with two confirmation samples from a given sidewall for excavations deeper than 5 feet, and one sample for each 2,500 square feet of excavation floor, Section 3.2.5 should ensure that floor samples will be collected in areas where sidewalls are extended, particularly if the contamination identified in the sidewall is near the bottom of the sidewall. This will ensure deeper contamination could be detected in areas where sidewalls are extended. Please revise Section 3.2.5 to ensure that floor samples are collected in areas where sidewalls are extended to ensure deeper contamination is assessed.
3. **Response to EPA Specific Comment 16:** The response addresses the comment; however, Section 3.3.2 (Extraction Wells) was not revised to clarify that if startup test results identify areas that are not influenced by the SVE wells, then appropriate contingency measures (e.g., increasing extraction rate, adding SVE wells, etc.) will be implemented. Please revise Section 3.3.2 to clarify that if startup test results identify areas that are not influenced by the SVE wells, then appropriate contingency measures (e.g., increasing extraction rate, adding SVE wells, etc.) will be implemented.
4. **Response to EPA Specific Comment 20:** The response addresses the comment; however, Design Drawings C5 (SVE Well and Soil Gas Monitoring Probe Details) of Appendix C (Design Drawings) was not revised to show the soil gas monitoring probes (GMPs) are constructed of 2-inch Schedule 40 PVC pipe, as described in Section 3.3.5 (Soil Gas Monitoring Probes). Please ensure Drawing C5 of Appendix C is revised to address this discrepancy.

5. **Response to EPA Specific Comment 26:** The response addresses the comment; however, the information presented in the response was not incorporated into Section 3.5.2.1 (Wall Lengths) to provide the logic that was applied when overlapping the slurry walls or to clarify that the groundwater modeling accounted for this overlap. Please revise Section 3.5.2.1 to explain the rationale for the proposed slurry wall overlap.
6. **Response to EPA Specific Comment 29:** The response does not address the comment. The response includes the revised text, “A target permeability of 10^{-5} centimeters per second (cm/sec) (maximum) is specified and, consistent with the modeling results provided in Appendix E, is sufficient to impede the horizontal flow of groundwater at IR-02 Northwest;” however, the text provided in Section 3.5.3 (Slurry Wall Mix) states, “A target permeability of 10^{-6} centimeters per second (cm/sec) maximum is specified and, consistent with the modeling results provided in Appendix E, is sufficient to impede the horizontal flow of groundwater at IR-02 Northwest.” As such, it is unclear if the target permeability is 10^{-5} cm/sec or 10^{-6} cm/sec. It should be noted that Section 2.6.3 (Subsurface Horizontal Flow Barriers) of Appendix E1 (Groundwater Containment System Modeling for Parcel E) indicates that the horizontal flow barriers have been modeled with “a K value of 10^{-5} feet per day.” Please update the Revised Draft RDP to address this discrepancy.
7. **Response to EPA Specific Comment 31:** The response partially addresses the comment. Water level measurements alone are insufficient to demonstrate that the slurry wall is functional. The functionality of the slurry wall should be discussed in the Five-Year Review Reports; data from chemical analyses of groundwater as well as hydraulic analysis should be provided to demonstrate that the slurry wall is functioning as designed. Section 3.5.5 (Monitoring/Extraction Wells and Piezometers for Nearshore Slurry Wall) should be revised to include sampling of monitoring wells inland of the slurry wall for chemical analysis. The results from those wells would then prompt sampling of the piezometers on the bay side of the slurry wall (e.g., if concentrations upgradient of the wall increase). Alternatively, Section 3.5.5 could recommend baseline sampling of bay side wells and sampling once every five years (i.e., prior to the Five-Year Review) to demonstrate that the slurry wall remains functional. Please revise Section 3.5.5 to include sampling of monitoring wells inland of the slurry wall for chemical analysis and an approach to determine when bay side well should be sampled. Alternatively, please revise the text to require baseline sampling of bay side wells and sampling once every five years to demonstrate that the slurry wall remains functional. In addition, please revise Section 3.5.5 to clarify that this methodology will be utilized in addition to relying on water level measurements.
8. **Response to EPA Specific Comment 37:** The response partially addresses the comment. The response indicates that quality control (QC) procedures for ensuring compliance with the design specifications will be detailed in the RAWP; however, it is unclear why the steps to be taken in case of failed QC test results were not included in the Revised Draft Construction Quality Assurance Plan for Parcel E, Hunters Point Naval Shipyard, San Francisco, California, dated November 2017 (Revised Draft CQAP). Please revise the Revised Draft CQAP of the Revised Draft RDP to include the steps to be taken in case of failed QC test results.

9. **Response to EPA Specific Comment 39:** The response partially addresses the comment. While Section 3.8.4.4 (Disposal of Excess Soil and Debris) was revised to reference the USEPA off-site rule, the revised text and Section 3.2.8 (Waste Characterization and Disposal of Excavated Soil, Sediment, and Debris), but the text does not specifically discuss the USEPA off-site rule with regard to meeting verification requirements for waste management facilities and notification procedures. Please revise Sections 3.2.8 and 3.8.4.4 to discuss the USEPA off-site rule with regard to meeting verification requirements for waste management facilities and notification procedures.
10. **Response to EPA Specific Comment 40:** The response partially addresses the comment. While the Wall Thickness subsection of Section 3.9.2.2 (IR-03 Slurry Wall Dimensions) was revised to clarify that preliminary water balance calculations indicated that the water level inside the slurry wall would be approximately three feet above mean sea level and the highest hydraulic head difference across the wall would be approximately five feet, the preliminary water balance calculations are not included and/or referenced. As a result, the revised text in Section 3.9.2.2 cannot be verified. Please revise the Wall Thickness subsection of Section 3.9.2.2 to include and/or reference the preliminary water balance calculations to support the revised text.
11. **Response to EPA Specific Comment 50:** The response does not address the comment. Figure 22 (Excavations at Redevelopment Block MU-1 Central) was not revised to clarify that the area associated with location IR36B064 will be addressed under the total petroleum hydrocarbon (TPH) corrective action program for Parcel E. However, moving excavation of the area associated with location IR36B064 to the TPH corrective action program is not appropriate given the presence of polychlorinated biphenyls (PCBs). Given the fact that the TPH corrective action program only addresses TPH, please revise the Revised Draft RDP to include the excavation of the area associated with location IR36B064.
12. **Response to EPA Specific Comment 55:** The response does not address the comment. The current EPA Radiological Preliminary Remedial Goal (PRG) calculator contains the most recent risk and dose coefficients, shielding factors, cancer slope factors and other such information that reflects the newest scientific research and data for use in assessing the protectiveness of site conditions. As such, the PRG calculator can and should be used to ensure that the remedial actions under consideration continue to fall within the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) acceptable risk range and therefore are protective of human health and the environment. Please provide an updated assessment of the total risk resulting from obtaining the remedial goals for the selected scenario.
13. **Response to EPA Specific Comment 56:** The response partially addresses the comment. The response does not address whether future use at the IR-02 and IR-03 sites will include any occupied buildings, such as a bathroom or interpretive facility. Please provide a response and/or revisions to the Remedial Design package for Parcel E that addresses this question. If any buildings are planned, please provide an analysis of the

potential risk associated with indoor exposures from radon resulting from residual Ra-226 contamination.

PRECONSTRUCTION OPERATION AND MAINTENANCE PLAN

1. **Response to EPA General Comment 1:** The response does not address the comment. The response indicates that integrity testing of the new sheetpile wall is not warranted as it will be used solely to provide temporary stabilization during construction; however, the response does not address the need for integrity testing of the existing sheetpile wall which Section 3.10 (Shoreline Protection) indicates “still provide structural support for the upland soil.” Please revise the Revised Draft RDP to discuss the need for integrity testing of the existing sheetpile wall given that it still provides structural support for the upland soil.

NEW GENERAL COMMENT

1. Based on Section 1 (Introduction) of the Draft Opinion of Probable Construction Cost for Parcel E, Hunters Point Naval Shipyard, San Francisco, California, dated November 2017 (Draft Cost Opinion), “This cost opinion does not include costs for operation and maintenance of the remedy, but does include costs for the first year of post-treatment monitoring at the VOC [volatile organic compound] plumes (to support a demonstration that the remedy is operating properly and successfully.” As a result, some costs necessary to implement the remedial design are not included in the Draft Cost Opinion. Section 4.7.6 (Prefinal/Final Design) of the Remedial Design/Remedial Action Handbook, EPA 540/R-95/059, dated June 1995 (RD/RA Handbook) indicates that the final operation and maintenance (O&M) cost estimate information should be “included as part of the materials submitted with the prefinal/final draft O&M manual” and that the prefinal/final remedial action (RA) cost estimate should be accurate within plus 15 percent and minus 5 percent. Given that the Revised Draft Preconstruction Operation and Maintenance Plan for Parcel E, Hunters Point Naval Shipyard, San Francisco, California, dated November 2017 (Revised Draft Preconstruction O&M Plan) is included in the Revised Draft RDP, please revise the Draft Cost Opinion to include costs for O&M of the remedy.

